

CLAIMS

What is claimed is:

1. A method for processing data events captured in a multi-protocol communications system, the method comprising:

accessing captured data events, each of the captured data events having an associated clock timestamp;

sorting at least some of the captured data events according to the respective clock timestamps associated with each of the captured data events;
and

displaying at least some of the sorted data events by way of a graphical user interface.

2. The method as recited in claim 1, wherein the displayed data events represent at least two different communication protocols.

3. The method as recited in claim 1, wherein the displayed data events represent at least two different communication protocols selected from the group consisting of: Infiniband; Gigabit Ethernet; SONET; Fibre Channel; and, PCI Express.

4. The method as recited in claim 1, wherein the clock timestamp is based upon one of: a reference clock; and, a protocol clock.

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5. The method as recited in claim 1, wherein the displayed data events are presented on the graphical user interface such that a temporal relationship between at least two of the displayed data events is apparent from the display.

6. The method as recited in claim 5, wherein the temporal relationship comprises one of the following: a first data event preceded a second data event; a first data event followed a second data event; a first data event overlapped a second data event; and, a first data event and second data event commenced substantially simultaneously and also concluded substantially simultaneously.

7. The method as recited in claim 5, further comprising using information concerning the temporal relationship to facilitate determination of whether or not a causal relationship exists between the at least two sorted data events.

8. The method as recited in claim 1, further comprising displaying information concerning at least some of the displayed data events, wherein the displayed information includes at least one of: a data event start time; a data event stop time; a data event delta time; a data event type; an analyzer port in connection with which a data event was captured; a timestamp value; and, a protocol type.

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9. A method for processing data events associated with a multi-protocol communications system, the method being suitable for use in connection with a multi-link protocol analyzer and comprising:

capturing data events, the captured data events collectively representing a plurality of communication protocols;

timestamping each of the captured data events in association with a clock;

sorting at least some of the captured data events according to the respective clock timestamps associated with each of the captured data events; and

displaying at least some of the sorted data events by way of a graphical user interface such that a temporal relationship between at least two of the displayed data events is apparent from the display.

10. The method as recited in claim 9, wherein the displayed data events represent at least two different communication protocols selected from the group consisting of: Infiniband; Gigabit Ethernet; SONET; Fibre Channel; and, PCI Express.

12. The method as recited in claim 9, wherein the clock timestamp is based upon one of: a reference clock; and, a protocol clock.

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13. The method as recited in claim 9, wherein the temporal relationship comprise at least one of the following: a first data event preceded a second data event; a first data event followed a second data event; a first data event overlapped a second data event; and, a first data event and second data event commenced substantially simultaneously and also concluded substantially simultaneously.

14. The method as recited in claim 9, further comprising determining whether a causal relationship exists between at least two displayed data events based upon the temporal relation between the at least two displayed data events.

15. The method as recited in claim 9, further comprising displaying information concerning at least some of the displayed data events, wherein the displayed information includes at least one of: a data event start time; a data event stop time; a data event delta time; a data event type; an analyzer port in connection with which a data event was captured; a timestamp value; and, a protocol type.

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16. A method for processing data events associated with a multi-protocol communications system, the method being suitable for use in connection with a multi-link protocol analyzer and comprising:

capturing data events, the captured data events collectively representing a plurality of communication protocols;

timestamping each of the captured data events in association with a clock;

sorting at least some of the captured data events according to the respective clock timestamps associated with each of the captured data events;

filling a display with at least some of the sorted data events; and

displaying the sorted data events in the display by way of a graphical user interface such that a temporal relationship between at least two of the displayed data events is apparent from the display.

17. The method as recited in claim 16, wherein the displayed data events represent at least two different communication protocols selected from the group consisting of: Infiniband; Gigabit Ethernet; SONET; Fibre Channel; and, PCI Express.

18. The method as recited in claim 16, wherein the clock timestamp is based upon one of: a reference clock; and, a protocol clock.

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19. The method as recited in claim 16, wherein the temporal relationship comprise at least one of the following: a first data event preceded a second data event; a first data event followed a second data event; a first data event overlapped a second data event; and, a first data event and second data event commenced substantially simultaneously and also concluded substantially simultaneously.

20. The method as recited in claim 16, further comprising determining whether a causal relationship exists between at least two displayed data events based upon the temporal relation between the at least two displayed data events.

21. The method as recited in claim 16, further comprising displaying information concerning at least some of the displayed data events, wherein the displayed information includes at least one of: a data event start time; a data event stop time; a data event delta time; a data event type; an analyzer port in connection with which a data event was captured; a timestamp value; and, a protocol type.

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22. A computer program product for implementing a method for processing data events captured in a multi-protocol communications system, the computer program product comprising:

a computer readable medium carrying computer executable instructions for performing the method, wherein the method comprises:

capturing data events, the captured data events collectively representing a plurality of communication protocols;

timestamping each of the captured data events in association with a clock;

sorting at least some of the captured data events according to the respective clock timestamps associated with each of the captured data events; and

displaying at least some of the sorted data events by way of a graphical user interface such that a temporal relationship between at least two of the displayed data events is apparent from the display.

23. The computer program product as recited in claim 22, wherein the displayed data events represent at least two different communication protocols selected from the group consisting of: Infiniband; Gigabit Ethernet; SONET; Fibre Channel; and, PCI Express.

24. The computer program product as recited in claim 22, wherein the clock timestamp is based upon one of: a reference clock; and, a protocol clock.

25. The computer program product as recited in claim 22, wherein the temporal relationship comprise at least one of the following: a first data event preceded a second data event; a first data event followed a second data event; a first data event overlapped a second data event; and, a first data event and second data event commenced substantially simultaneously and also concluded substantially simultaneously.

26. The computer program product as recited in claim 22, wherein the method further comprises determining whether a causal relationship exists between at least two displayed data events based upon the temporal relation between the at least two displayed data events.

27. The computer program product as recited in claim 22, wherein the method further comprises displaying information concerning at least some of the displayed data events, wherein the displayed information includes at least one of: a data event start time; a data event stop time; a data event delta time; a data event type; an analyzer port in connection with which a data event was captured; a timestamp value; and, a protocol type.

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